



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,321	01/04/2006	Takashi Kamiya	Q92351	6979

23373 7590 09/25/2007
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

SHECHTMAN, SEAN P

ART UNIT	PAPER NUMBER
----------	--------------

2125

MAIL DATE	DELIVERY MODE
-----------	---------------

09/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,321

Applicant(s)

KAMIYA ET AL.

Examiner

Sean P. Shechtman

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/10/07; 11/13/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: IDS filed 1/4/06.

Art Unit: 2125

DETAILED ACTION

1. Claims 10-20 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The abstract of the disclosure is objected to because it is unclear how the workpiece model is created based on the selected workpiece data if the workpiece data is selected based on the workpiece model (i.e., since the workpiece model already exists, it is believed that the workpiece model would have already been created). The phrase "a center of the turning axis" is unclear, i.e., it is not clear how an axis has a center. Correction is required. See MPEP § 608.01(b).
4. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: See for example, page 4, lines 4-20, it is unclear how the workpiece model is created based on the selected workpiece data if the workpiece data is selected based on the workpiece model (i.e., since the workpiece model already exists, it is believed that the workpiece model would have already been created). See for example, page 4, lines 4-20, the phrase "a center of the turning axis" is unclear, i.e., it is not clear how an axis has a center.

Art Unit: 2125

5. The disclosure is objected to because of the following informalities: Referring to page 10, line 2, "twp" should be "two". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 10-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 10, 15, 16, it is unclear how the workpiece model is created based on the selected workpiece data if the workpiece data is selected based on the workpiece model (i.e., since the workpiece model already exists, it is believed that the workpiece model would have already been created).

Referring to claims 10, 15, 16, the phrase "a center of the turning axis" is unclear, i.e., it is not clear how an axis has a center.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 10-12, 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/095512 to Kamiya (whole document). Although not relied upon in the rejection, in order to

Art Unit: 2125

expedite the prosecution of the instant application, the examiner will reference the corresponding U.S. Pat. No. 6,850,814 to Kamiya (hereinafter referred to as Kamiya).

Referring to claims 10, 15, 16, Kamiya teaches an automatic programming method/apparatus/computer of selecting workpiece data from a workpiece database in which a material, a shape, and a dimension of a workpiece are registered, creating a workpiece model for lathe turning based on the selected workpiece data (Col. 5, lines 2-34; Col. 1, lines 52 – Col. 3, line 29), and creating a program for controlling a numerical control device based on a product model for lathe turning and the created workpiece model (Col. 13, lines 16-31; Col. 14, lines 30-54), the automatic programming method comprising:

workpiece selecting including selecting workpiece data involving a product shape and having a smallest diameter for lathe turning around a turning axis from the workpiece database; by comparing dimension data of the workpiece model with dimension data of the product model in a state in which the product model is arranged on the turning axis and the workpiece model is arranged so that a center axis of each workpiece matches a center of the turning axis (Fig. 6, Col. 6, lines 25-39, envelope shape and part shape; Col. 8, lines 26-37); and selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape and a shortest length (Col. 8, lines 3-37); and creating the workpiece model for lathe turning based on the selected workpiece data (Fig. 6, Col. 6, lines 25-39; Col. 8, lines 26-37).

11, 17. The automatic programming method according to claim 10, wherein a shape of the workpiece is a round bar, and the workpiece selecting further includes obtaining a longest

Art Unit: 2125

distance between the turning axis and a fringe area of the product model; and selecting a round-bar work having a radius equal to or longer than the longest distance and a smallest diameter (Col. 8, lines 26-37).

12, 18. The automatic programming method according to claim 10, wherein a shape of the workpiece is a polygonal bar, and the workpiece selecting further includes obtaining respective distances between line segments parallel to respective fringes of the polygonal bar and tangent to the product model and the turning axis; obtaining a maximum value from among the obtained distances; and selecting a polygonal work model having an opposite side distance equal to or larger than twice of the obtained maximum value and a shortest opposite side distance (Fig. 6, Col. 6, lines 25-39; Col. 8, lines 26-37).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 10-12, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 4,723,203 to Kishi et al (hereinafter referred to as Kishi).

Referring to claims 10, 15, 16, Kishi teaches an automatic programming method/apparatus/computer of selecting workpiece data from a workpiece database in which a material, a shape, and a dimension of a workpiece are registered, creating a workpiece model for lathe turning based on the selected workpiece data (Col. 4, lines 52 – Col. 5, lines 32), and creating a program for controlling a numerical control device based on a product model for lathe turning and the created workpiece model (Col. 11, lines 62 – Col. 12, lines 18), the automatic programming method comprising:

workpiece selecting including selecting workpiece data involving a product shape for lathe turning around a turning axis from the workpiece database, by comparing dimension data of the workpiece model with dimension data of the product model in a state in which the product model is arranged on the turning axis and the workpiece model is arranged so that a center axis of each workpiece matches a center of the turning axis (Col. 8, lines 53 – Col. 11, lines 43); and selecting, when there is a plurality of workpiece data involving the product shape for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape (Fig. 2D, Col. 5, lines 16-32); and creating the workpiece model for lathe turning based on the selected workpiece data (Col. 11, lines 62 – Col. 12, lines 18).

Kishi teaches all of the limitations set forth above, however fails to teach selecting workpiece data having a smallest diameter a shortest length.

However, Kishi teaches that various machining processes are performed when it is determined that the blank profile dimensions of diameter and length are too large. Therefore, the

Art Unit: 2125

examiner respectfully submits that it would have been obvious to one of ordinary skill in the art at the time that the invention was made to select the workpiece data having a smallest diameter and a shortest length to minimize wasted material since it is commonly known in the art that in lathes, it is preferable to reduce the diameter of a workpiece in incremental fashion (Although not relied upon in the rejection, see for example, col. 9, lines 32-42 of U.S. Pat. No. 3,751,651 to Pomella et al).

11, 17: The automatic programming method according to claim 10, wherein a shape of the workpiece is a round bar, and the workpiece selecting further includes obtaining a longest distance between the turning axis and a fringe area of the product model; and selecting a round-bar work having a radius equal to or longer than the longest distance (Col. 6, lines 58 – Col. 7, lines 4).

12, 18. The automatic programming method according to claim 10, wherein a shape of the workpiece is a polygonal bar, and the workpiece selecting further includes obtaining respective distances between line segments parallel to respective fringes of the polygonal bar and tangent to the product model and the turning axis; obtaining a maximum value from among the obtained distances; and selecting a polygonal work model having an opposite side distance equal to or larger than twice of the obtained maximum value and a shortest opposite side distance (Col. 4, lines 52 – Col. 5, lines 32, special blank).

9. Claims 13, 14, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya or Kishi as applied to claims 10, 16 above, and further in view of U.S. Pat. No. 6,112,133 to Fishman (hereinafter referred to as Fishman).

Art Unit: 2125

Referring to claims 13, 14, 19, 20, Kamiya or Kishi teaches all of the limitations set forth above, however fail to teach the workpiece selecting further includes displaying workpiece data involving a product shape is in a list from the workpiece database in an increasing order of cutting amount; and highlighting minimum workpiece data from among the workpiece data displayed in the list.

However, Fishman teaches displaying workpiece data involving a product shape is in a list from the workpiece database in an increasing order of cutting amount; and highlighting minimum workpiece data from among the workpiece data displayed in the list (Fig. 8; Col. 6, lines 1-34).

Kamiya or Kishi and Fishman are analogous art because they are from the same field of endeavor, computer controlled lathes.

At time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Kamiya or Kishi with the GUI of Fishman.

The suggestion/motivation would have been because Fishman teaches a graphical user interface, for inputting part information for defining a plurality of faces, a set of features associated with each of the plurality of faces, and a set of machining operations and cutting tools associated with each element of the set of features, that allows multiple windows to be displayed and accessed simultaneously on a computer monitor (Col. 3, lines 23-45).

Conclusion

10. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2125

The following patents or publications are cited to further show the state of the art with respect to lathes and the preference to reduce the diameter of a workpiece in incremental fashion.

U.S. Pat. No. 3,751,651 to Pomella et al.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754.

The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman



September 16, 2007

9/16/07